REMARKS

This is responsive to the Examiner's Final Office Action dated September 27, 2007. By way of summary, Claims 1-10 and 25-38 were, and remain, pending in this application. Applicants have hereby amended Claim 34 for clarification purposes and/or to correct a minor typographical error. Accordingly, Applicants present Claims 1-10 and 25-38 for further consideration in view of the following comments.

The specific changes to the specification and any claims are shown by strikethrough or double bracketing for any deletions, and underlining for any insertions.

The Examiner rejected Claims 1-10 and 25-38 under:

- 35 U.S.C. § 112, ¶ 2 as being indefinite;
- 35 U.S.C. § 112, ¶ 1 as failing to comply with the written description requirement;
- 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Nos. 5,738,728, 5,743,960, 5,741,554, 5,916,524 to Tisone, U.S. Patent No. 5,338,688 to Deeg et al. (hereafter "Deeg"), U.S. Patent No. 5,658,802 to Hayes et al. (hereafter "Hayes"), and U.S. Patent No. 5,807,522 to Brown et al. (hereafter "Brown");
- 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,576,295 B2 and U.S. Patent Application Publication No. 2002/0001675 A1 to Tisone (the Tisone patent documents are hereafter referred to as "Tisone"); and
- 35 U.S.C. § 103(a) as being obvious in view of Tisone, Deeg, Hayes or Brown.

Applicants respectfully traverse these rejections and the Examiner's characterization of the cited references on the bases set forth herein and below. Each of these rejections is addressed in further detail below.

Specification

As shown above, paragraph numbers [0001] and [0174] of the specification have been amended to update the status of a priority application and to correct a minor typographical error, respectively. No new matter has been introduced. Accordingly, Applicants respectfully request entry of these amendments.

Claims 1-10 and 25-38 are Not Indefinite

The Examiner rejected Claims 1-10 and 25-38 under 35 U.S.C. § 112, second paragraph as being indefinite. More specifically, the Examiner asserted that the claims are vague and indefinite as to "how the text files are created and to their contents," and further that the claims are not clear as to "what is intended by the claimed software program."

Applicants respectfully disagree with the Examiner's assertions and characterizations that the claims are indefinite, and maintain that **the claims do particularly point out and distinctly claim the subject matter which Applicants regard as their invention**.

The inquiry conducted by the Examiner under 35 U.S.C. § 112, second paragraph is explained in M.P.E.P. 2173.02. As explained therein, the essential inquiry pertaining to definiteness is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Also, definiteness is analyzed in light of the content of the application disclosure, the teachings of the prior art and the claim interpretation that would be given by one of ordinary skill in the art at the time the invention was made. In short, the inquiry is whether the claim serves the notice function required by 35 U.S.C. § 112, second paragraph.

Here, independent Claim 1 is directed to a method for high-speed precise dispensing of microfluidic quantities of a reagent onto or into a target and recites, among other things:

> creating a user-defined text file containing lists of white space delimited numbers defining a dispense pattern that is to be formed on or in said target ...

As set forth above, the "text file" is created based on a "dispense pattern" and contains "lists of white space delimited numbers." Additional details on text file creation and structure are provided by the Application as filed (see, for example, paragraph numbers [0168] to [205] of the specification, and FIG. 11 of the drawings), and some of these features are set forth in the dependent claims. Furthermore, examples of text files and their contents are also explicitly presented in the specification, such as, as follows (emphasis added):

> This simple example moves a single channel dispenser 128 (FIG. 1) to four locations and dispenses 50 nL (0.05 μL) to each location. The first row of the ***TEXT FILE A*** contains the XYZ coordinates, the second row contains the dispense volume. This is repeated for the additional dispenses.

TEXT FILE A

20.5	55.8	10.4
0.05		
37.8	50.4	10.4
0.05		
45.6	38.2	12
0.05		
85.7	65.4	11
0.05		

[0193] In this particular example, the ***software*** 510 (FIG. 11) is programmed with a four pass Loop action 516 containing a Move action 514 and a Dispense action 512. With each pass through the loop, the Move action 514 reads the X, Y and Z values from the ***TEXT FILE A*** and instructs the controller 114 to move the dispensing head 128 (FIG. 1) to those coordinates. The Dispense action 512 reads the dispense volume, and accordingly instructs the controller 114 to dispense the required volume via actuations of the pump 120 and dispenser 128, as discussed herein.

...

[0197] To dispense the volumes of TABLE 3, in this example, the total volume in each well is composed of a series of drops using two incremental or integral droplet volumes, for instance 0.1 μL and 1 μL. In this case, a user-defined ***TEXT FILE B*** is created as follows (only a portion of the file is shown):

TEXT FILE B

2	2	4	4	6	6	...	6	6	0	0
0	0	0	0	0	0	...	4	4	5	5

[0198] The first row in ***TEXT FILE B*** specifies the number of 0.1 μL drops whereas the second row specifies the number 1 μL drops (the numbers are duplicated because the 8-channel dispenser must dispense twice per column to fill all wells of a 384 well plate). In one embodiment of the ***software*** 510 (FIG. 13), a Loop action 516 uses this ***TEXT FILE B*** as its counter. In other words, the Loop 516 executes a function that contains a Dispense action 512 of 0.1 μL the number of times denoted in the ***TEXT FILE B***. Likewise, another Loop action 516 calls a Dispense action 512 of 1 μL the prescribed number of times. These Loops combined with Move actions 514 (which can also use the same ***text file***, a different one or be programmed directly into the ***software*** 510 by the user) will produce a dispense recipe as shown in TABLE 3.

[0199] Thus, the 8-channel dispenser moves across the micro-well plate and dispenses a series of 0.1 μL drops into the

> appropriate wells. The 8-channel dispenser also moves across the micro-well plate a second time dispensing a series of 1 μL drops into the appropriate wells. Of course, other variations and modifications are possible, such as dispensing 0.1 μL from some channels while sequentially (serially) or substantially simultaneously (parallely) dispensing 1 μL form other channels. Alternatively, or in addition, either sequential (serial) or substantially simultaneous (parallel) valve firing may be employed.

Claim 1 further recites, among other things:

> ... said text file being accessible by said controller through a software program such that rapid and accurate dispensing is performed.

As set forth above, the "text file" is accessible by the "controller" through a "software program ..." and clearly recites the cooperation therebetween to achieve "rapid and accurate dispensing." Additional details on the software program are provided by the Application as filed (see, for example, paragraph numbers [0168] to [225] of the specification, and FIG. 11 of the drawings), and some of these features are set forth in the dependent claims. With particular reference to FIG. 11 of the drawings, the specification sets forth the following, among other details of the software program **510** (emphasis added):

> **[0169]** In brief, the ***software*** 510 executes a series of actions or functions for moving the dispense head 128 (FIG. 1) or multiple dispense heads 128 as shown in FIGS. 2A-2C to dispense (and/or aspirate) user-defined volumes of one or more reagents or other liquids. These actions are ***programmed*** by the user entering in the volume and coordinates for the dispense (or aspirate) operation(s).
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> **[0170]** For example, if the user wishes to dispense 100 nanoliters (nL) at location X = 25 mm, Y = 38 mm, Z = 20 mm, the volume is entered into a Dispense action or function 512 (FIG. 11) and the coordinates into a Move action or function 514 (FIG. 11). For looped operations, such as multiple dispense locations, a Loop action or function 516 (FIG. 11) is provided. Also, for aspirate operations the ***software*** 510 has an Aspirate action or function 518 (FIG. 11). These actions contain suitable computer codes or programs so that the ***software program*** 510 can provide the controller 114 with appropriate instructions or commands.
>
> ...
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> **[0174]** Depending on the particular application, the user first generates a spreadsheet template or a spreadsheet of values to be used by the ***software*** 510 (FIG. 11). This step is labeled 522 in

FIG. 11. The spreadsheet may be generated by a number of commercially available software packages, such as Microsoft Excel and the like, or other customized software.

[0175] The spreadsheet contains information such as dispense and/or aspirate volumes and corresponding coordinates. The user then saves the spreadsheet, preferably in the form of a tab-delimited ***text file*** 520 (FIG. 11) such as "FILENAME.TXT". This file name is entered by the user (step 524 in FIG. 11) when running the ***software*** 510. More than one ***text file*** may be used, for instance, different files may be created for access by Aspirate, Dispense, Move and/or Loop actions. Moreover, the spreadsheet itself may be in the form of a text file or other similar and/or compatible format, and hence may be directly input into the ***program*** 510.

[0176] When the ***software*** 510 (FIG. 11) is run, the file 520 is read by the ***program*** 510. In one embodiment, the values from the ***text file*** 520 are accessed or read sequentially and corresponding operations performed sequentially. In another embodiment, the values from the ***text file*** 520 are accessed or read in a substantially parallel (simultaneous) manner and corresponding operations performed substantially parallely (simultaneously). In yet another embodiment, the values from the ***text file*** 520 are accessed or read and then stored in memory to create a database 528 (FIG. 11), possibly, with other operational parameters or characteristics of the particular dispensing system.

...

[0179] Advantageously, the use of ***text files*** provides a means which adds to the versatility and efficiency of dispensing (and/or aspiration) functions. As indicated above, these **text files** are lists of numbers that can be generated from spreadsheet programs. The ***text file*** data is used to control the looping structure of the program, the locations of the dispense head, and the volumes dispensed (and/or aspirated). For example, spreadsheet formulas can be used to generate a list of dispense volumes and XYZ coordinates. This list is preferably saved as a tab-delimited ***text file***. From within the ***program*** 510 (FIG. 11), instead of the user specifying volumes, the user specifies the file name for list of volumes which the ***program*** 510 reads in a coordinated fashion and instructs the controller 114 accordingly, for example, to implement motion and dispense control of the system, for instance, as described above in connection with FIGS. 7, 8 and 9A-9C and TABLE 1.

[0180] ***Text file*** control may be employed with any of the embodiments disclosed, taught or suggested herein. In general, this technology provides the ability to dispense programmed drop

> volumes in a quantitative format using a hydraulic coupling between a syringe pump 120 (FIGS. 1, 2A-2C and 4) and a micro solenoid valve 128 (FIGS. 1, 2A-2C and 3). Several modes and approaches of dispensing are described herein above and further below. All of these can be controlled by information provided through one or more ***text files*** input into ***software*** interfaced with a controller to provide high-speed precision dispensing and overall operation.
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> ...
>
> **[0184]** One advantage of using ***text file*** control in conjunction with the aspirate-dispense systems and operations of the embodiments herein is that complex patterns of dispense location and volume can be easily achieved through, for example, a spreadsheet template. This is useful for "combinatorial" dispensing applications where "n" numbers of reagents are combined in different reagent and/or volume ratio combinations. Desirably, the user can custom design the combinatorial experiment using the ***text file*** (and/or spreadsheet format) and then easily download the experiment to the ***software*** 510 (FIG. 11) for execution.

Applicants submit that, in view of the details contained in the present application, together with the details understood in the prior art, the present claims serve the notice requirement of 35 U.S.C. § 112, second paragraph. Accordingly, Claims 1-10 and 25-38 are **not** indefinite, and do particularly point out and distinctly claim the subject matter which Applicants regard as their invention. As such, Applicants request that the 35 U.S.C. § 112, 2nd paragraph rejections be promptly withdrawn.

Claims 1-10 and 25-38 Comply With the Written Description Requirement

The Examiner rejected Claims 1-10 and 25-38 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. More specifically, the Examiner asserted that the specification teaches in paragraph [101+] a host CPU (402) and a controller card, and that it is not clear what is intended by the "controller card" and how one having ordinary skill in the art could make and use such a card. Thus, the Examiner is basing this rejection on the "adequate written description" requirement of 35 U.S.C. § 112, first paragraph.

Applicants respectfully disagree with the Examiner's assertions and characterizations that the specification does not describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. **The**

specification does provide a sufficient description of the claimed invention such that one of ordinary skill in the art could reasonably conclude that the inventor had possession of the claimed invention. Applicants note that there is a strong presumption that an adequate written description is present when the application is filed. *See M.P.E.P. 2163.*

With respect to the "controller card" (emphasis added below), for example, paragraph numbers [0098] to [108] of the specification, *inter alia*, offer a clear disclosure of the same as illustrated by the subject specification paragraphs presented below:

> **Controller Overview**
>
> **[0098]** FIG. 7 illustrates one possible embodiment of an electronic controller 114 for controlling and coordinating the operation of the aspirate-dispense apparatus 108 (FIG. 1). Of course, and as indicated above, this controller design is extendable and/or adaptable to control and coordinate the operations of systems comprising multiple pumps 120 and cooperating dispensers 128, as shown for example in FIGS. 2A and 2C, and/or systems comprising a manifold intermediate a single pump 120 and multiple dispensers 128, as shown for example in FIG. 2C. Thus, as the skilled artisan will appreciate, the following description of the controller 114 should be construed in light of possible modifications and equivalents.
>
> **[0099]** The controller 114 (FIG. 7) generally comprises a host CPU 402 or computer which interfaces with some form of data memory. ***In particular, the controller may be roughly divided into five basic subsystems: host CPU 402, coordinate control circuitry 404, memory and logic circuitry 406, syringe stop count circuit 408, and valve firing circuit 412. Each of these subsystems are illustrated schematically by phantom lines in FIG. 7 and are described in more detail below.***
>
> **[0100]** Those skilled in the art will appreciate that each subsystem works in cooperation with the other subsystems to simultaneously control the coordinate stepper motors 123, 124 (FIG. 1) the syringe pump motor 142 (FIG. 1) and the solenoid valve dispenser 128 (FIG. 1) to achieve the desired operation. The controller 114 is further adapted to control aspiration of fluid, perform wash/purge operations and refill the system with fluid from the reservoir 116 (FIG. 1), as needed or desired.
>
> **Host CPU**
>
> **[0101]** A host CPU 402 serves as the central controller and also the interface between the controller 114 and the user. It allows the operator to input dispensing, aspirating, motion and/or other operational data, preferably in the form of a user-defined "Text File", as discussed in greater detail below. The CPU 402 allows

the user to control, either independently or simultaneously, each aspect of the dispensing and aspirating apparatus 108 (FIG. 1).

[0102] In one embodiment, the host CPU 402 generally comprises a 80x86 or Pentium-based computer having a slot or bus compatible to accept a plug-in circuit board. ***The circuit board or "controller card" contains the four subsystems shown in FIG. 7. The controller card mounts or plugs into a computer bus providing data transfer and communication of instructions. The host CPU 402 also provides power to the controller card and further allows an operator to access, program and control the functions of the controller card. It is further contemplated that the host CPU 402 contains suitable computer software compatible with the host CPU and the controller card which facilitates operation of the system as described herein.***

[0103] Preferably, a display device and data input means are integral with the host CPU 402 thereby providing means to input data into a memory or static RAM array 414 located on the ***controller card*** and to verify the same using the display device. As is known by those of ordinary skill in the art, a keyboard, mouse, trackball, light pen, capacitance touch screen, computer storage media are all acceptable data input means. Likewise, a color video monitor or screen provides a suitable display means.

[0104] Using a data entry device, such as a keyboard, an operator may enter data into the host CPU 402 in the form of a data array (or graphical bit map) to thereby instruct the electronic controller and dispensing apparatus of the desired reagent pattern and characteristics. Conventional computer software may facilitate the entry of the data array (or bit map) via the host CPU 402 to the memory 414 of the ***controller card***. As described in further detail below, preferably, a user-defined text file is used to provide input data to the controller 114 (FIG. 7).

[0105] In one embodiment, the ***controller card*** is compatible with a PC-AT clone, i.e. 80x86 or Pentium-based architecture. ***The controller card form factor and bus configuration match a PC-104 format, thereby allowing the circuit design to be quickly and inexpensively manufactured in a circuit board format.*** In the particular preferred embodiment shown and described above, the host CPU 402 utilizes a Motorola 68332 processor as the main microprocessor. However, as known by those skilled in the art, other computer systems and host CPU's may be used with equal advantage.

[0106] For the purposes of the present application, a bus generally comprises an electrical connection which facilitates the exchange of information, such as address information, data information and/or instructions. The controller 114 (FIG. 7)

includes an address bus 416 which carries address information, and a data bus 418 which carries data information. The data bus 418 and the address bus 416 connect to the memory and logic circuitry 406. Advantageously, the data bus 418 and the address bus 416 are bi-directional thereby allowing the transfer of data between the ***controller card*** and the memory and logic circuitry 406. Thus, the controller 114 may display status information from the ***controller card*** on the video display of the host CPU 402 or alternatively, write the information to a data file on a permanent storage medium. As is known to those of ordinary skill in the art, other types of electrical connections exist which carry electronic information and are fully contemplated for use with the embodiments disclosed, taught or suggested herein.

Memory and Logic Circuitry

[0107] Connected to the host CPU 402 (FIG. 7) is a network of circuitry referred to herein as the memory and logic circuitry 406. In general, the memory and logic circuitry 406 stores the data which defines the desired dispensing and aspiration pattern and characteristics. As described in further detail below, preferably, a user-defined text file is used to provide operational data to the controller 114 (FIG. 7). Other hard-wired logic circuitry, such as a counter 424 and multiplexer 426, may also be used, as desired, to parse dispensing data to the other subsystems of the controller 114 or to speed up the processing of information and control data.

[0108] In particular, the memory and logic circuitry 406 (FIG. 7) generally comprises an electronic memory 414 for storing data regarding reagent dispense, aspirate and motion parameters, a tri-state buffer 420, a divisor 422, an address counter 424, a multiplexer 426 and various logic circuitry to assure proper operation of the electronic controller 114. The tri-state buffer 420 connects to the host CPU 402 via the data bus 418 and serves to isolate the CPU from the ***controller card.*** The buffer is adapted to rapidly accept and store data to further increase data transfer speed and free the host CPU 402 of data transfer operations. In turn, the tri-state buffer 420 connects to the memory module 414, preferably a static ram array. The tri-state buffer 420 also connects to the output lines of the static ram array 414 for direct control of the syringe motor 142 (FIG. 1) and the solenoid valve dispenser 128 (FIG. 1).

The above description of the "controller card," among other system control details provided in the specification is plainly in compliance with the requirement of 35 U.S.C. § 112, first paragraph. One of ordinary skill in the field of the invention could immediate envisage the

product claimed based upon the disclosure, including that described above. Thus, Applicants submit that Claims 1-10 and 25-38 comply with the requirements of 35 U.S.C. § 112, first paragraph. As such, Applicants request that the 35 U.S.C. § 112, 1st paragraph rejections be promptly withdrawn.

Claims 1-10 and 25-38 are Not Anticipated by the Cited Art

The Examiner rejected Claims 1-10 and 25-38 as being anticipated by Tisone, Deeg, Hayes and Brown. The Examiner referred to the April 24, 2007 Office Action which merely sets forth a blanket statement that the cited art "teaches methods an apparatus for high speed dispensing of microfluidic reagents comprising a dispensing means, a displacement pump, means to control the dispensing and the associated means to track the position of the dispensed reagent." The Examiner further characterized the claimed invention to be a "method of dispensing using a preprogrammed pattern."

Applicants admit that the cited art relates to dispensing of liquids in a "predetermined pattern." Applicants have also admitted that at least some of the Tisone references teach an arrangement of a "positive displacement pump" and "dispenser" as set forth in some of Applicants' claims. However, not one of Deeg, Hayes or Brown teaches or suggests such an arrangement. Moreover, Tisone, Deeg, Hayes and Brown fail to teach or suggest other limitations of the claimed invention. (A detailed analysis addressing these anticipation rejections is provided in Applicants' Response filed on July 23, 2007 and as such is not repeated here. However, it is incorporated herein and the Examiner is requested to reconsider the rejections again.)

In brief, though the cited references relate to liquid dispensing of a "predetermined pattern," none of them teach or even suggest doing so by accessing a "text file" as set forth in the Applicants' claims. Moreover, the Examiner has failed to even address the bases for rejecting many, if not all, of the dependent Claims 2-10 and 25-38 which vary the scope of protection, and only relies on conclusory statements which appear to be directed only towards independent Claim 1.

To reiterate, Applicants disagree that Tisone, Deeg, Hayes and Brown disclose every limitation of the rejected claims. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art

reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants again further note the Examiner's failure to find support in the cited references of every limitation of the rejected claims. Also, all of the cited references have been carefully studied and the improperness of each of the Examiner's rejection is detailed in the Response filed on July 23, 2007.

Accordingly, Applicants submit that Claims 1-10 and 25-38 are not anticipated by the cited references. As such, Applicants request that the anticipation rejections be promptly withdrawn.

Claims 1-10 and 25-38 are Not Obvious in View of the Cited Art

The Examiner rejected Claims 1-10 and 25-38 as being obvious in view of Tisone, Deeg, Hayes or Brown. The Examiner again referred to the April 24, 2007 Office Action which merely sets forth a blanket statement that the cited art "teaches methods an apparatus for high speed dispensing of microfluidic reagents comprising a dispensing means, a displacement pump, means to control the dispensing and the associated means to track the position of the dispensed reagent." The Examiner again further characterized the claimed invention to be a "method of dispensing using a preprogrammed pattern."

The Examiner asserted that "it would have been within the skill of the art to use an "off the shelf" program package to control the cited prior art. Off the shelf program packages are desirable because they are created by professional programmer(s) who make the software more user friendly and provide customer support." Furthermore, the Examiner stated that it would have been within the skill of the art to modify Tisone, Deeg, Hayes or Brown and use an "off the shelf program," such as "Axsys" from "Cartesian Technologies" to gain the above advantages.

Applicants have admitted that the cited art relates to dispensing of liquids in a "predetermined pattern." Applicants have also admitted that at least some of the Tisone references teach an arrangement of a "positive displacement pump" and "dispenser" as set forth in some of Applicants' claims. However, again, none of Deeg, Hayes or Brown teaches or suggests such an arrangement. Moreover, Tisone, Deeg, Hayes and Brown fail to teach or suggest other limitations of the claimed invention. (The Examiner is again referred to the detailed analysis of the cited art presented in Applicants' Response filed on July 23, 2007.)

Applicants disagree with the Examiner's obviousness rejections which fail to establish a *prima facie* showing of obviousness. Paragraph number [0168] of Applicants' specification does refer to "AxSys" software from "Cartesian Technologies" as one embodiment of the control software as follows (emphasis added):

> **[0168]** The software to control the aspirate-dispense systems 108 (FIG. 1), 108a (FIG. 2A), 108b (FIG. 2B) and 108c (FIG. 2C) may be designed in a wide variety of manners. ***In one embodiment, the dispense, aspirate and motion control software 510 (FIG. 11) utilizes AxSys software*** as available from Cartesian Technologies, Inc. of Irvine California.

However, independent Claim 1 recites (emphasis added):

> ***creating a user-defined text file*** containing lists of white space delimited numbers ***defining a dispense pattern*** that is to be formed on or in said target, ***said text file being accessible by said controller through a software program*** such that rapid and accurate dispensing is performed.

Thus, the features of text file creation and the cooperation between the text file, the software and the controller provide the advantages, among others, of rapid and accurate dispensing. Since none of the cited references contemplates creating or using a text file as set forth in Applicants' claims, any software program to control the cited art would lack the claimed combination of features.

Applicants conceived of the importance of using "**text files**" to control dispensing operations as an improvement over the cited Tisone references. If the cited art had recognized this, it would clearly have been disclosed or at least suggested therein. However, the cited art fails to do so, and accordingly, the cited references fail to establish a *prima facie* showing of obviousness.

Finally, Applicants submit that the Examiner has again not addressed the bases for the obviousness rejections of many, if not all, of the dependent Claims 2-10 and 25-38 which vary the scope of protection, and only relies on conclusory statements which appear to be directed only towards independent Claim 1.

Accordingly, Applicants submit that Claims 1-10 and 25-38 are not obvious in view of the cited references. As such, Applicants request that the obviousness rejections be promptly withdrawn.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

Co-Pending Applications of Assignee

Applicants wish to draw the Examiner's attention to the following co-pending applications of the present application's assignee.

Serial Number	Title	Filed	Attorney Docket No.
11/447,598	METHOD FOR DISPENSING REAGENT ONTO A SUBSTRATE	June 6, 2006	BIODOT.8DV1C1D1
11/332,857	METHOD FOR HIGH THROUGHPUT DROP DISPENSING OF SPECIFIC PATTERNS	January 13, 2006	BIODOT.028C1CP1
10/445,690	STATE-VARIABLE CONTROL SYSTEM	May 27, 2003	BIODOT.029DV1
10/420,356	METHOD FOR HIGH-SPEED DOT ARRAY DISPENSING	April 21, 2003	BIODOT.030DV1C1
10/421,636	METHOD AND APPARATUS FOR LIQUID DISPENSING	April 22, 2003	BIODOT.031CPDV1

Conclusion

Applicants respectfully submit that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that

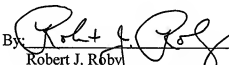
portion; rather, patentability must rest on each claim taken as a whole. Applicants respectfully traverse each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments may have been made, no acquiescence or estoppel is or should be implied thereby. Rather, any amendments are made only to expedite prosecution of the present application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby.

Applicants have made a good faith effort to respond to the outstanding Office Action. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is cordially invited to contact Applicants' attorney, at the telephone number below, to resolve any such issues promptly. Also, please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 1.25.2008

By: 
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